US Army Corps
of Engineers
North Central Division

GREAT LAKES LEVELS

Update Letter No. 87 October 2, 1992

EPA Releases Lake Michigan LaMP

U.S. Environmental Protection Agency (EPA) Region V has released a proposed Lakewide Management Plan that will help focus efforts to reduce critical pollutants in the Lake Michigan Basin.

"The plan will not develop any new environmental regulations," said Regional Administrator Valdas V. Adamkus. "Rather, it will guide existing regulations to where they will do the most good."

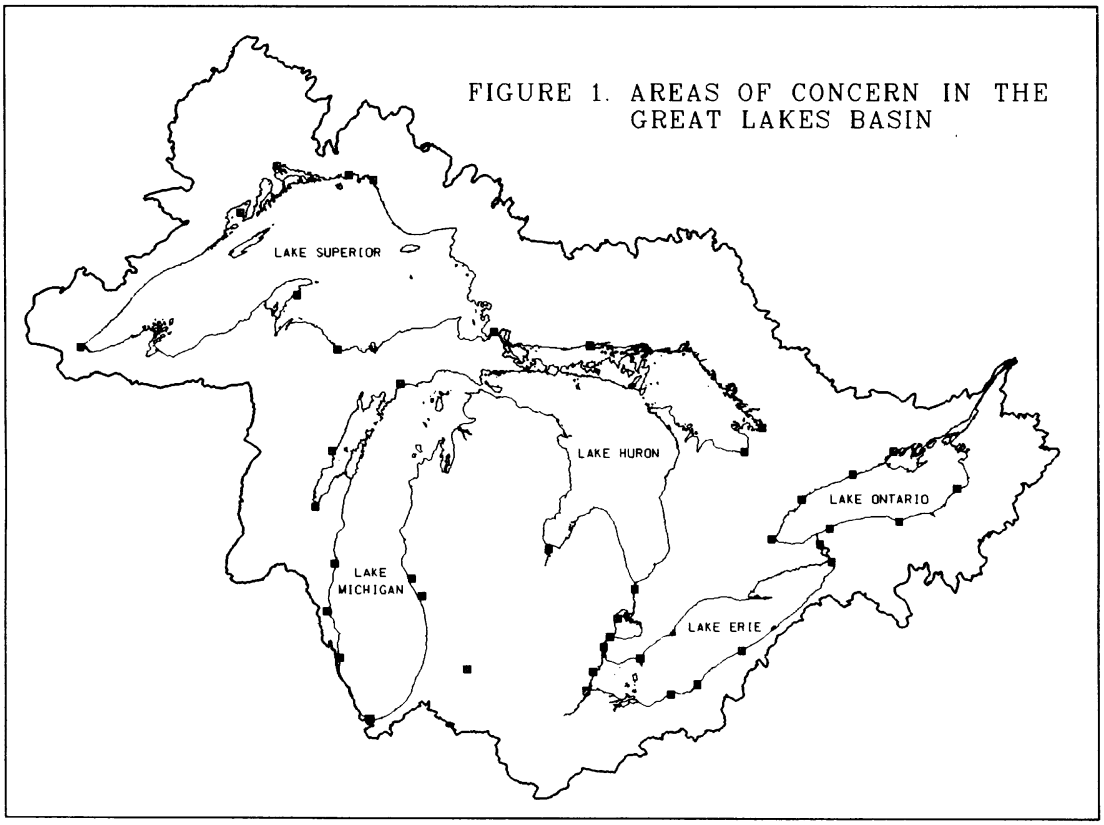


FIGURE 1. AREAS OF CONCERN IN THE GREAT LAKES BASIN

The plan ranks pollutants according to their effects on the lake ecosystem and identifies possible sources of these pollutants. Federal and State environmental agencies can then concentrate their protection efforts on pollutants that pose the most serious risk.

A public comment period on the proposed plan will run through December 9, 1992. In addition, a series of public workshops and hearings will be held throughout the Lake Michigan Basin to provide information on the plan and to receive public input. Details on dates and locations of these meetings and information on how to obtain a copy of the LaMP are provided at the end of this update letter.

What is a LaMP?

LaMP is the acronym for Lakewide Management Plan. LaMPs are management strategies being drafted for each of the Great Lakes. These plans will identify ways to reduce and prevent pollution and restore the ecology of the Great Lakes under the terms of the Canada - U.S. Great Lakes Water Quality Agreement.

Framework for LaMP development

As early as the mid-1980s, the Great Lakes states and provinces began developing Remedial Action Plans (RAPs) for Areas of Concerns (AOCs). The 43 AOCs are the bays and tributaries — such as Green Bay and the Kalamazoo River — thought to bring the greatest loads of pollution into the Lakes. When the Great Lakes Water Quality Agreement was amended in 1987, officials agreed that lakewide efforts looking at the entire ecosystem were needed in addition to the localized RAPs.

Annex 2 of the Agreement calls for the development and implementation of a LaMP for the open waters of each of the Great Lakes. The purpose of a LaMP is to reduce loadings of Critical Pollutants in order to restore beneficial uses of the open Lake waters.

Unlike the RAPs, which are primarily developed by the states and provinces, the LaMP development process is being led by the two federal governments. Working together, the EPA and Environment Canada will guide the development of a LaMP for each of the Great Lakes in concert with other Federal and state/ provincial agencies. Because Lake Michigan lies completely within U.S. boundaries, the Lake Michigan LaMP is being developed by the EPA in partnership with other U.S. Federal and state agencies.

A timetable for LaMP development was mandated by the Great Lakes Critical Program Act of 1990 (an amendment to the Federal Clean Water Act). A proposed Lake Michigan LaMP has been released for public review. (See page 1). Region V EPA and partner agencies have begun researching and writing the Lake Superior LaMP, and the Lake Erie and Lake Huron LaMPs will follow in 1993 and 1994 respectively. The Lake Ontario LaMP is the responsibility of the EPA's Region II office and is scheduled separately. The content of each LaMP will vary according to each Lake's specific environmental conditions.

The development of the LaMPs is a dynamic process. For the Lake Michigan LaMP, a Management Committee made up of officials from many Federal and State agencies oversees technical work groups, reviews and approves the LaMP, and secures the dollars to develop and implement the LaMP. Interest groups, including nonprofit organizations, industries, and local governments, make up a Lake Michigan Forum. The Forum serves as a communication link between the Management Committee and the broader public, contributing ideas, concerns, and opinions about critical issues as the LaMP is developed.

Each draft LaMP will also be submitted to the International Joint Commission for review and comment. Finally, each LaMP is an evolving document that will be updated as new information becomes available.

The Region V EPA has provided funds to the Great Lakes Sea Grant Network to carry out water quality education and LaMP outreach activities. The Great Lakes Sea Grant Network has planned many activities to enable people to better understand water quality issues and get involved in the LaMP process. Six regional workshops are planned around the shores of Lake Michigan. Eight fact sheets are being written to clarify scientific and policy issues in the LaMP documents. A slide show about water quality issues and the LaMP process is being developed and will be made widely available throughout the basin (including videotape copies). Sea Grant personnel in all of the Great Lakes States will be available to speak to community groups, clubs, planning committees, and other interest groups.

Strong involvement in the LaMP process by people who care about the Lakes will ensure that the LaMPs are forceful documents that can lead the way to reducing and preventing pollution and restoring the ecology of the Great Lakes. Individuals can get involved in the LaMP process by reading fact sheets, attending workshops and formal public meetings, inviting Sea Grant personnel to speak in their area, and reviewing and commenting on draft documents.

For more information about LaMP workshop notices, educational materials, and presentations, contact:

Karen Vigmostad, LaMP Education Coordinator
Michigan Sea Grant
Michigan State University
334 Natural Resources
East Lansing, MI 48824-1222
(517)-336-1628 or
(517)-336-3160

The Draft Lake Michigan LaMP

The EPA initiated the Lake Michigan LaMP, in cooperation with the Lake Michigan basin States and other Federal agencies, in the summer of 1990. Since then, EPA and the other agencies have compiled and analyzed existing information regarding the status of the Lake Michigan ecosystem with respect to toxic pollutants, drafted a document that summarizes use impairments and identifies a proposed set of Critical Pollutants, and created an organization structure to manage the process.

Many government agencies have worked with EPA as part of the Management Committee in creating the draft plan; U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Army Corps of Engineers, U.S. Department of Agriculture, Illinois Environmental Protection Agency (EPA), Indiana Department of Environmental Management (IDEM), Michigan Department of Natural Resources (MDNR), Wisconsin Department of Natural Resources (WDNR), and the Chippewa/Ottawa Treaty Fishery Management Authority. Help has also come from the Lake Michigan Forum, a LaMP advisory forum whose members include representatives from industry, local government, and citizen groups.

The Lake Michigan LaMP will not develop new regulations. Rather, the LaMP attempts to focus existing regulations by directing their application to problems that pose high risks to the Lake Michigan ecosystem, and by enlisting a mix of agencies and authorities to determine the most efficient and effective approach to preventing and resolving ecosystem impairments. However, the LaMP will also identify areas where new laws and regulations or changes to existing statutes may be desirable.

The LaMP is not a new, independent program. Its objective is to reorient existing environmental programs so that they work together to improve and protect the health of a specific ecosystem. The LaMP requires limited additional staff in EPA and the States to serve as coordinators, with the bulk of the implementation work to be accomplished by existing programs. The LaMP resources are used primarily to boost and coordinate existing programs and monitor environmental results for a focused ecosystem approach to environmental protection.

Critical Pollutants

The January 1, 1992, draft LaMP presents a problem assessment and proposed Critical Pollutant list which are derived from existing information. Literature was reviewed and data retrieved from accessible data bases in order to assess use impairments in Lake Michigan, identify the pollutants associated with those impairments, identify sources of those pollutants, and estimate loadings. The LaMP will be updated on an annual basis. Each update will contain additional information regarding perceived problems or impairments, pollutant sources, and loadings, as well as a revised action agenda and progress report.

The draft LaMP proposes a four tier listing system for Critical Pollutants. The amount of effort applied to reducing loads of pollutants will be based on the level to which they are assigned, and on the potential for successfully reducing and preventing releases.

Level I consists of those pollutants which violate the most stringent State or Federal water quality standards and/or criteria, or which exceed FDA action levels in Lake Michigan fish, and are judged by the LaMP Management Committee as impairing ecological functions on a lakewide scale. Level II consists of those pollutants that the LaMP Management Committee determines are strongly associated with ecological impairments in Lake Michigan. Pollutants placed within Level I or II will be designated Critical Pollutants necessitating immediate LaMP action. The

Table 1. Proposed Critical Pollutants for Lake Michigan

Level I	**Level III**	Zinc
Total PCBs	Furans	Hexachlorobenzene
Dieldrin	**Level IV**	Toxaphene
Chlordane	PAHs	
DDT and metabolites	Lead	
Mercury	Chromium	
Level II	Copper	
Dioxin	Cadmium	

Critical Pollutants proposed in the draft Lake Michigan LaMP are listed on Table 1.

Levels III and IV consist of pollutants for which presently available information regarding ecological impairment or lakewide effects is insufficient to warrant inclusion on the list of Critical Pollutants. The LaMP will act as a forum to encourage load reductions as additional information is being established regarding the severity of ecological impacts associated with these pollutants.

Lake Michigan LaMP Actions

The Lake Michigan LaMP document contains an action agenda for FY 1992. Many of these activities are currently being developed and/or implemented. Actions include investigations of pollutant loadings to the Lake from atmospheric sources, contaminated groundwater, hazardous waste sites, tributaries, point source dischargers, and other facilities. LaMP-related projects to reduce loadings and promote pollution prevention were also initiated in FY 1992, including agricultural and urban clean sweep projects in several states, inventories and closures of injection wells, and stormwater programs at some cities.

Work plan formulation for FY 1993 and institutionalization of the LaMP process into existing environmental programs is proceeding. LaMP participants must reach consensus regarding priority activities so that the LaMP process can be incorporated into the operating plans for each agency.

As part of the FY 1993 action plan, the States are working with EPA and the U.S. Geological Survey to formulate a whole-lake monitoring plan. The purpose of this plan is to develop a matrix of the major pathways of contaminants into the Lake. In addition, LaMP participants will initiate other components of the LaMP monitoring program, including tributary monitoring to track trends and detect emerging problems, and monitoring of ecosystem indicators.

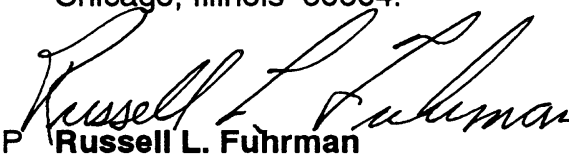
LaMP Review

The draft Lake Michigan LaMP document has been released for public comment. The comment period ends on December 9, 1992. EPA is particularly interested in public input regarding ecosystem objectives and desired end sites for the Lake, the problem characterization contained in the document, and the proposed approach for resolving identified problems. Public comment will be incorporated into the LaMP document before the document is officially submitted to the IJC for review as required by the Great Lakes Critical Programs Act.

Copies of the proposed plan are available from the following organizations:

USEPA, Jeanette Morris-Collins (312) 886-0152
Illinois EPA, Bob Schacht (708) 531-5900
Indiana DEM, David Dabertin (219) 881-0152
Michigan DNR, Robert Day (517) 335-3314
Wisconsin DNR, Water Resources Mgmt. Division
(608) 266-0155
Lake Michigan Federation, Chicago, IL (312) 939-0838
Green Bay, WI
(414) 432-5253
Milwaukee, WI,
(414) 271-5059
Muskegon, MI,
(616) 722-5116

Comments on the draft LaMP should be addressed to Constance Hunt, USEPA Region V, Water Quality Branch, WQ-16J, 77 West Jackson Blvd., Chicago, Illinois 60604.



Russell L. Fuhrman
Brigadier General, U.S. Army
Commanding General and
Division Engineer

Great Lakes Basin Hydrology

The precipitation, water supplies, and outflows for the lakes are provided in Table 2. Precipitation data include the provisional values for the past month and the year-to-date and long-term averages. The provisional and long-term average water supplies and outflows are also shown.

Table 2
Great Lakes Hydrology[1]

PRECIPITATION								
BASIN	SEPTEMBER				YEAR-TO-DATE			
	1992*	AVG.**	DIFF.	% OF AVG.	1992*	AVG.**	DIFF.	% OF AVG.
Superior	5.0	3.5	1.5	143	24.5	23.0	1.5	107
Michigan-Huron	4.4	3.5	0.9	126	24.1	24.1	0.0	100
Erie	5.2	3.1	2.1	168	31.6	26.7	4.9	118
Ontario	4.2	3.2	1.0	131	30.0	26.1	3.9	115
Great Lakes	4.7	3.4	1.3	138	26.0	24.4	1.6	107

LAKE	SEPTEMBER WATER SUPPLIES***		SEPTEMBER OUTFLOW[3]	
	1992[2]	AVG.[4]	1992[2]	AVG.[4]
Superior	139,000	73,000	76,000	84,000
Michigan-Huron	96,000	31,000	179,000[5]	194,000
Erie	33,000	-18,000***	227,000[5]	203,000
Ontario	30,000	5,000	286,000	247,000

*Estimated (inches)

**1900-90 Average (inches)

***Negative water supply denotes evaporation from lake exceeded runoff from local basin.

[1]Values (excluding averages) are based on preliminary computations.
[2]Cubic Feet Per Second (cfs)
[3]Does not include diversions
[4]1900-89 Average (cfs)
[5]Reflects effects of ice/weed retardation in the connecting channels.

For Great Lakes basin technical assistance or information, please contact one of the following Corps of Engineers District Offices:

For NY, PA, and OH:
COL John W. Morris
Cdr, Buffalo District
U.S. Army Corps
of Engineers
1776 Niagara Street
Buffalo, NY 14207-3199
(716) 879-4200

For IL and IN:
LTC David M. Reed
Cdr, Chicago District
U.S. Army Corps
of Engineers
River Center Bldg (6th Flr)
111 North Canal Street
Chicago, Il 60606-7206
(312) 353-6400

For MI, MN, and WI:
COL Brian J. Ohlinger
Cdr, Detroit District
U.S. Army Corps
of Engineers
P.O. Box 1027
Detroit, MI 48231-1027
(313) 226-6440 or 6441